Our Mission

“The principle mission of the Bandera County River Authority and Groundwater District is to protect and preserve the county’s water and natural resources for the State of Texas. The District is also tasked with maintaining local accountability of the county’s water resources to help safeguard the property rights of the citizens of Bandera County.”
Groundwater Reports
Quarterly Well Report

Registered Wells 2nd Quarter 2020
- January - 9 wells
- February - 11 wells
- March - 8 wells

Total 2nd Quarter 2020 = 28 wells

Registered Wells 2nd Quarter 2019
- January - 4 wells
- February - 5 wells
- March - 10 wells

Total 2nd Quarter 2019 = 19 wells

Permitted Wells - 1

Variance Requests - 6 approved, 0 pending
Monitor Well Program

- 42 monitor wells
- Static levels collected monthly
- Water Quality samples collected quarterly
Groundwater Evaluation

**Middle Trinity Aquifer, (Bandera County) average**
July 2010 to March 2020  *average decline*  ----------------------------  -20.1 ft.
March 2019 to March 2020  *average decline*  ----------------------------  -16.2 ft.

**Lower Trinity Aquifer**
July 2010 to March 2020  *average decline*  ----------------------------  -13.2 ft.
March 2019 to March 2020  *average decline*  --------------------------  -0.8 ft.

**Edwards Group of the Edwards - Trinity (Plateau) Aquifers**
(Edwards Monitor Well)
June 2011 to March 2020  *increase*  ------------------------------------  +5.9 ft.
March 2019 to March 2020  *decreased*  -----------------------------------  -1.6 ft.
Abandoned Well-Plugging Program

0 Wells Plugged this Quarter

Bandera County Well # 1. This well is improperly capped. The open wellhead is covered only by a piece of plastic and some wood. The well is abandoned and the casing has deteriorated.
Geophysical Logging Program

2 Geophysical Logs this Quarter
Groundwater Analyses

2nd Quarter 2020
● Mineral Only - 2
● Bacteria Only - 28
● Both - 31

VS

2nd Quarter 2019
● Mineral Only - 5
● Bacteria Only - 40
● Both - 36
Investigations

5 Nuisance Complaints
0 Notice of Violation
Shown on this slide are images taken from illegal dumping investigations conducted by our Code Enforcement Officer and associated team.
Illegal Dumping Litter Abatement Program

Illegal dumping includes the following possible violations:

➔ Sewage or septic tank failures

➔ Illegal trash dumps

➔ Violations of TCEQ or EPA rules on dumping waste including, but not limited to, harmful chemicals, VOCs, heavy metals, etc.

➔ Any waste of water as defined in the Texas Water Code and BCRAGD rules
Clean Rivers Program

- Quarterly water quality assessments and samples taken from sites on the Medina River Basin and the Nueces River Basin
  - 8 Medina River sites
  - 5 Medina Lake sites
  - 3 Sabinal River / Seco Creek sites

- BCRAGD partners with San Antonio River Authority and Nueces River Authority for Quality Assurance/Quality Control, Data Entry, and Laboratory Services

- Aquatic Life Monitoring with SARA during the summers
CRP Sampling Dates

Sabinal River
- January 8, 2020

Medina River
- January 2 & 29, 2020
- February 13, 2020

Medina Lake
- February 2, 2020
- February 19 & 26, 2020
In-House Surface Water Quality Sampling

- Initiated to monitor surface water quality for the purpose of protecting the resource and public health in frequented recreational areas.

- 22 sites in the Medina and Sabinal Rivers, and Seco Creek, are sampled quarterly during the year.

- Recreational hotspots are sampled bi-weekly during the summer.

- Results are posted on the BCRAGD website and submitted to the local newspaper.
Quarterly In-House Results from March 5 & 10, 2020

<table>
<thead>
<tr>
<th>Location</th>
<th>MPN</th>
<th>Location</th>
<th>MPN</th>
<th>Location</th>
<th>MPN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medina Lake - Park @ PR 37</td>
<td>1 MPN</td>
<td>Bandera City Park @ 1st St</td>
<td>770 MPN* 308 MPN**</td>
<td>W. Prong @ Coalkil Rd</td>
<td>275 MPN</td>
</tr>
<tr>
<td>English Crossing</td>
<td>228 MPN</td>
<td>Tarpley Crossing</td>
<td>214 MPN</td>
<td>W. Prong @ Carpenter Ck</td>
<td>155 MPN</td>
</tr>
<tr>
<td>Bridlegate Park</td>
<td>261 MPN</td>
<td>Ranger Crossing</td>
<td>345 MPN</td>
<td>Williams Ck in Tarpley</td>
<td>238 MPN</td>
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<tr>
<td>Bandera River Ranch Park</td>
<td>Dry</td>
<td>Moffett Park in Medina</td>
<td>133 MPN</td>
<td>Seco Ck @ RR470</td>
<td>17 MPN</td>
</tr>
<tr>
<td>Bandera Creek @ SH 16 S</td>
<td>228 MPN</td>
<td>1st Crossing @ RR337</td>
<td>70 MPN</td>
<td>Sabinal R @ Cornelus Rd</td>
<td>275 MPN</td>
</tr>
<tr>
<td>Lower Mason Creek</td>
<td>84 MPN</td>
<td>N. Prong, Brewington</td>
<td>127 MPN</td>
<td>Sabinal R @ SH187</td>
<td>270 MPN</td>
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<tr>
<td>Upstream of WWTP, Bandera</td>
<td>579 MPN* 125 MPN**</td>
<td>N. Prong, Rocky Ck</td>
<td>727 MPN* 56 MPN**</td>
<td>Sabinal R @ Lost Maples</td>
<td>308 MPN</td>
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<td>Bandera City Park @ SH173</td>
<td>1987 MPN* 291 MPN**</td>
<td>N. Prong, Wallace Ck</td>
<td>275 MPN</td>
<td>West Verde Ck @ FM1077</td>
<td>308 MPN</td>
</tr>
<tr>
<td>Utopia City Park</td>
<td>488 MPN* 461 MPN**</td>
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</tbody>
</table>

*indicates that the sample was over the TCEQ threshold
**indicates a resample done on March 10th

The above results can also be found on the BCRAGD website, www.bcragd.org, and the BCRAGD Facebook page. BCRAGD is not a certified lab. Results are for informational purposes only.

**MPN stands for “most probable number”**
Medina Lake Update

Measurements provided by the Texas Water Development Board’s Water Data for Texas website (https://waterdatafortexas.org/reservoirs/individual/medina) accessed for report on March 24, 2020:

- On March 24, 2020, Medina Lake measured 73.4% full.
- On February 24, 2020, Medina Lake measured 75.2% full.
- On December 24, 2019 Medina Lake measured 78.7% full.
Medina Lake Update

[Graph showing reservoir storage levels from May 2019 to Mar 2020, with conservation and flood pools indicated.]
Invasive Species Management Update
Arundo Donax Surveys

BCRAGD will be continuing our partnership with Texas Parks and Wildlife to control the spread of Arundo Donax, an invasive species in the state of Texas. The program has been put on hold due to COVID-19. The Arundo Donax pictured to the left and below are untreated, while the Arundo Donax pictured to the right is treated.
Education & Outreach Programs
2nd Quarter Education

- February 27, 2020 and March 6 & 7, 2020, the Education and Outreach team attended Project WILD workshops.
- On February 25, 2020, BCRAGD co-sponsored the Hill-Side Stewardship with Hill Country Alliance. This included an interactive and engaging program for Bandera County Landowners.
- On February 11, 2020, BCRAGD presented to the 5th graders of Hill Country Elementary with the Nueces River Authority.
2nd Quarter Outreach

February 26, 2020

BCRAGD, in conjunction with USGS, held an update meeting on the Upper Sabinal River Flood Early Warning System in Utopia, Texas.

That same day, BCRAGD hosted the USGS’s Public Training on the completed Medina River Flood Early Warning System.
BCRAGD in the Media

BCRAGD is continuing to improve our community outreach through social media. We prioritize posting the latest water quality results, flood awareness and gauge resources, water successes, and news stories. We also keep the public informed on educational visits, informational / educational meetings, and public events.
Rainfall Monitoring

➔ Gages and Weather Stations
  ◆ USGS gages track precipitation
  ◆ BCRAGD was granted access to a weather station provided by the Edwards Aquifer Authority through a HOBOlink.

➔ BCRAGD has a network of volunteers called Rainspotters that submit rainfall in inches that they record each month.
Rainfall Update

Rainfall data for the period January-February-March 2020 from EAA gauge at BCRAGD office reports:

- January = 5.31 inches
- February = 1.66 inches
- March = 1.34 inches
- Rainfall Max = 0.59 inches

Rainspotter and Electronic data may be subject to revision due to quality assurance standards and non-calibration of equipment recorded or verified. Although compares very well with similar rainfall gauges of stations reviewed that are maintained by USGS within approximate County vicinity.
Sabinal River Flood Early Warning System

- Gage sights have been identified and installation of the gage is in the process of being scheduled.
- The project is scheduled for completion in August 2022.
• On March 11, 2020, District employees Levi Sparks and Clint Carter met with the Hill Country Alliance, Texas Parks & Wildlife Department, and employees of the City of Bandera to discuss and plan a future erosion control project for the City Park. This will improve both the aesthetic value and the environmental value of the City Park and in turn, will improve the overall health of the Medina River.
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